ISSUANCES
of the
Meat and Poultry Inspection Program

May 1977

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UNITED STATES DEPARTMENT OF AGRICULTURE
Food Safety and Quality Service
Meat and Poultry Inspection Program
Washington, D.C. 20250

UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND QUALITY SERVICE
MEAT AND POULTRY INSPECTION PROGRAM
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Meat and Poultry Inspection Manual

May 1977 **CHANGE:** 77-5

MAINTENANCE INSTRUCTIONS

Remove Page	Insert Page	Numbered
15 through 20	15 through 20	77-5
79, 80, and 80a	79,80, and 80a	77-5
125 through 130b	125 through 130h	77-5
137 through 142	137 through 142b	77-5
211 through 214	211 through 214	77-5

Pen-and-Ink Changes

Page 97, section 11.18(a), paragraph 3, cross off "originating from different farms or feedlots in same State as the plant. Animals moved through stockyards or public auctions shall be excluded, unless their origin is determined."

Page 215a, MP Form 519, change number of copies from "3" to "2" and under Distribution change to read: "Gov. Office--original, Plant--duplicate."

Page 215b, delete the form ANH 3-63B.

NOTE: Because of extensive revision, changes on pages 125 through 130h are not starred.

May 20, 1977

PART 7

FACILITIES AND EQUIPMENT

FACILITIES

Subpart 7-A

(Regs: M-307, 308; P-Subparts G, H)

Plant facilities must be safe, efficient for proper inspection, and capable of being kept sanitary. Facility requirements are stated in the regulations. Interpretation of such requirements, and suggested construction and layout methods for meat plants are in "Agriculture Handbook No. 191." The inspector should be familiar with the information in such sources.

7.1 WALKWAY

For safe and efficient ante-mortem inspection, horse or other equine slaughtering plants must have a walkway--at least 48 inches high, 24 inches wide, with safety rail--along the inside of the pens.

7.2 INEDIBLE PRODUCT FACILITIES

Layout and equipment should assure prompt and efficient handling of inedible and condemned material.

(a) Door

Doorways between edible and inedible departments must be fitted with tight-fitting, self-closing doors.

Effective air screens may substitute for such doors if approved by STS-PFE.

(b) Chute, Conveyor

To prevent objectionable odors from entering edible product departments, chutes used for moving material from edible to inedible product departments must be properly hooded and vented. Where other means are used to convey such materials, adequate measures must be taken to control odors. *

7.3 LIGHTING

Adequate lighting must be provided to all areas where edible product is examined, processed, or stored; where equipment and utensils are washed; in dressing and restrooms, and in hand washing areas.

(a) Light Fixture

Light bulbs, fixtures, skylights, or other glass suspended over product shall be of safety type or otherwise protected to prevent product contamination if broken. A protective shield of suitable, nonshattering material (approved plastic) shall be used unless other equally effective means can be demonstrated. *

(b) Light Intensity; Meter

Lighting quantity should be determined by light meters. Lighting adequacy is determined not only by intensity, but also by direction, contrast, and color.

(1) Meat plant. The following minimum light intensities should be available before inspection:

Ante-mortem inspection area--10-foot candles in pens, alleys, or areas where inspection is actually

performed. Meter readings taken at 3 feet above the floor.

Suspect pen--20-foot candles over entire suspect pen and restraint facilities. Meter readings taken at 3 feet above the floor.

Headwashing cabinet (cattle)--50-foot candles at level of head hook.

Head inspection (cattle):

1. Head rack--all areas of head illuminated to 50-foot candles down to symphysis of mandible;

2. Head chain--50-foot candles at lowest inspection point on hanging heads.

Head inspection (swine)--50-foot candles at level of mandibular lymph nodes on lowest hanging heads.

Viscera truck (cattle)--50-foot candles at lower pan.

Viscera inspection (all species)--50-foot candles on pan of moving top table.

Carcass inspection (all species)--50-foot candles at shoulders.

Final inspection (all species)--50-foot candles at shoulder level, viscera pan, and head rack.

Carcass cooler--10-foot candles at level of carcass front shank. This does not apply to hot carcass coolers unless they are also used as carcass holding coolers.

Offal coolers--20-foot candles at lowest level of open product storage; 50-foot candles at packing and reinspection areas.

(2) Poultry plant. Light intensities above those stated in the regulations are often needed to obtain good production rates.

To counter effect contrasted lighting, shielding may be desirable.

* * *

* 7.4 WAX FINISHING (POULTRY)

Facilities must be provided to prevent wax, used in dipping operations, from falling onto the floor. Wax that accidentally falls onto the floor shall not be reused.

7.5 SEAFOOD FACILITIES *

Areas where seafood is scaled, eviscerated, cleaned, etc., shall be separate from rooms where other edible product is prepared. Such areas must be approved and equipped with suitable sanitary equipment.

When edible seafood is processed, the operation must be separate from meat and poultry processing operations. As far as practicable, seafood processing should be conducted in separate areas using separate equipment. However, when equipment is used interchangeably, it must be thoroughly washed and sanitized after being used for seafood.

EQUIPMENT

Subpart 7-B

(Regs: M-307; P-Subpart H)

Equipment used for preparing or storing product must be suitable for intended purpose. It must be of acceptable material and construction to be easily cleaned, and must not adulterate product, nor constitute hazard to the health and safety of inspectors.

7.9 ACCEPTANCE

* The "Accepted Meat and Poultry
* Equipment" booklet should be checked for equipment standards and acceptance procedures. When equipment is
* brought into the plant, the inspector
* should check this booklet to determine
* whether the equipment has been
* approved. If not approved, he should
* reject it until approved by STS-PFE.

7.10 INSTALLATION

Major pieces of equipment must be shown on approved blueprints before
* installation is permitted. When equipment is installed on an experimental basis, drawings showing its location
* on floor plans must be submitted within 30 days after acceptance.

7.11 JET-VACUUM EQUIPMENT

Such equipment (used for cleaning jars or cans) must have safety devices to indicate malfunction of either jet or vacuum elements.

To control exhaust currents and to prevent dust and/or paper particles being blown back into cleaned containers, vents to the outside should be provided if necessary.

7.12 HOSE

Transparent plastic hoses may be used for conveying product if approved by STS-PFE. Rubber hoses or rubber-lined hoses are acceptable for water and steam lines where breakdown and cleaning are not required. They are not acceptable for recirculating water used on product or processing equipment.

7.13 PICKLE LINE

All pickle lines should be made of stainless steel or approved plastic. Those carrying salvaged pickle must be demountable for cleaning.

7.14 SMOKEHOUSE, OVEN

Smokemaking equipment and ducts in smokehouses and ovens must be designed for easy cleaning of all inner and outer surfaces.

7.15 CLEAN-IN-PLACE (CIP) SYSTEM

Sanitation procedures for CIP systems must be as effective as those for cleaning and sanitizing disassembled equipment. To remove all organic and inorganic residues, CIP system must meet the following criteria:

a. Cleaning and sanitizing solutions and rinse water must contact all interior surfaces of the system.

b. The system must be self-draining with no low or sagging areas.

c. Pipe interiors must be highly polished (120-180 grit) stainless steel * for easy inspection.

d. Easily removable elbows at each change of direction to provide an access for inspection.

e. Any part not included in CIP system must be dismantled and manually cleaned.

f. All sections of the system, including overhead lines, must be available for inspection without safety hazard to inspectors.

g. Effectiveness of CIP system

must be evaluated by periodic dismantling for inspection of its interior surfaces.

(a) Accessibility

All equipment parts must be readily accessible for cleaning and inspecting. In large equipment, appropriately located stairways, catwalks, or other suitable provisions must be made to insure that all parts can be safely and efficiently cleaned and inspected.

(b) Pump; Pipeline

Pumps, pipes, conductors, valves, and fittings, used in connection with edible product (including pickle or vinegar solutions), should be of 300 Series stainless steel or approved plastic. High impact resistant glass pipelines may be approved on an individual basis by STS-PFE.

Pumps and pipelines conveying product must be easy to dismantle for cleaning and must not have dead space where product may stagnate. These requirements apply to lines used to convey raw fat and to recirculate rendered fats used in cooking and frying operations. Black iron pipelines with threaded or welded joints are acceptable for conveying rendered fats.

Continuous rendering is not considered complete until after the final centrifuge.

(c) Screen, Strainer, Filter

Screening and straining devices shall be readily removable for cleaning and inspecting and shall be designed to prevent wrong installation. Permanent screening and straining surfaces should be of rust-resistant metal. Filter paper shall be of single-service type. Filter cloths shall be washable.

7.16 OZONE

(a) Use

Ozone producing equipment may be used only in coolers set aside for aging meat.

The ozone concentration in the air--as measured and recorded by proper devices--shall not exceed .1 ppm. Before inspections are performed, ozone generating equipment must be shut off and the ozone permitted to dissipate.

(b) Ultraviolet Lamp

Lamps producing ozone are restricted for use as outlined above. Those not producing ozone may be used in any area, provided:

1. They are shielded to prevent exposure of inspectors to direct or reflective ultraviolet rays; or
2. Rooms where unshielded units are used have light switches at entry points so the units may be turned off before inspectors enter. Such switches shall be identified by suitable placards such as "Ultraviolet Lights."

Inspectors shall not enter areas where unshielded ultraviolet lights are burning because of possible damage to skin and eyes.

STS-PFE will publish approved non-ozone producing ultraviolet lamps in the "equipment list."

7.17 HEAT EXCHANGERS

They may be used to heat or chill product, or gases or liquids that may contact product. Their use must not result in product contamination. Inspectors should be alert to:

a. Exchange media containing toxic components. Only chemicals approved by STS-SS shall be used. Common materials--brine, ammonia, etc.--need not be submitted for approval.

b. Contamination of product by color, odor, or taste.

c. Pinholes, hairline cracks, loose fittings, or other defects that could permit leakage into product.

d. Evidence of leakage such as need to replenish supply of heat exchange medium.

7.18 VISCERA INSPECTION TABLE

Both surfaces of flight top table should be thoroughly flushed on each rotation. At least the product contact surface shall be subjected to 180° F. water sprays in the sanitizing compartment. Number, location, and direction of sprays can best be judged by the results. If more cold water sprays are needed to flush the flight bottom, they should be placed just before the table enters the sanitizing compartment.

Accumulation of blood, fat, manure, etc., on either surface of the table is evidence that corrective action is needed. Insufficient pressure, plugged spray heads, low water temperature, not enough spray heads to cover the surface, or improperly directed or positioned spray heads are common problems. Cooked blood and juices indicate that the table is not adequately flushed with cold water before entering the sanitizing compartment.

7.19 COMPRESSED AIR

In certain operations when compressed air may or does contact product and/or equipment, such air shall be filtered before entering a compressor; and be clean and free from moisture, oil, or other foreign matter.

Compressed air storage tanks must have a drain. Water and oil traps shall be between storage tank and point of use. Spent air must be exhausted preventing product contamination.

Air contacting product must be filtered as near the air outlet as feasible. Filter must be capable of withholding 50-micron particles and must be readily removable for cartridge replacement or cleaning. Air intake on votators shall also be filtered.

7.20 PRODUCT RECONDITIONING EQUIPMENT (MEAT)

Where product may accidentally become soiled, a separate, conveniently located and properly equipped wash table--with sprays, removable and perforated plate to hold product off the bottom, etc.--shall be provided. Such table should be identified as a "product wash table" and it should not be used for hand or implement washing.

7.21 ELECTRIC CORDS

The acceptance of electric cords should be viewed from a sanitary and safety aspect. Drop cords from the ceiling, whether retractable or suspended, used to connect portable equipment are acceptable. Cords strung across the floor or serving as temporary connections are not acceptable. *

7.22 ELECTRIC INSECT TRAPS

They may be used in edible product handling or storing areas provided they:

a. Are of acceptable materials. *

b. Have protective grille to prevent electric shock. *

c. Have suitable shelf or drawer to remove trapped insects. *

d. Trap all dead insects. Such insects do not stick to the grille and create an odor, nor are they used as bait for flies. *

7.23 INEDIBLE PRODUCT EQUIPMENT

(a) Containers

They must be watertight, free of rust and corrosion, distinctively marked with uniform identification, and acceptably clean before entry into edible product departments.

(b) Tanks, Trucks (Poultry)

Watertight, covered metal barrels, tanks, or trucks may be used for holding inedible poultry products. They may be placed in an inedible product room, or outside the building on paved, drained, and conveniently located areas provided with hose connection for cleanup.

PART 8

SANITATION

SANITATION INSPECTION

Subpart 8-A

(Regs: M-308; P-Subpart H)

Buildings, rooms, equipment, or other facilities shall be sanitarily maintained and in good repair.

8.1 MANAGEMENT'S RESPONSIBILITY

Plant management is responsible for producing wholesome products in a clean plant, utilizing hygienic procedures.

(a) Agreement

When inspection is granted, a responsible plant official signs a statement agreeing to strictly conform to all Federal regulations and orders pertaining to inspection. He actually guarantees that the plant will be maintained in sanitary conditions.

(b) Training

Plant management is responsible for training plant employees in proper handling of product and other sanitary procedures.

8.2 PREOPERATIVE INSPECTION

(a) Inspection by Plant Employee

In each plant or department a competent individual shall be responsible for the sanitation program. He shall inspect the plant or department before operations to insure that a satisfactory cleanup was done and shall allow operations to begin only when all sanitation requirements are attained.

(b) Inspection by MPI Employee

The inspector shall conduct preoperative sanitation inspection of premises, facilities, equipment, and utensils to determine cleanup acceptability. He should especially examine product contact zones, and equipment difficult to clean or more likely to be poorly cleaned.

Individual utensils or items such as buckets, pans, trucks, etc., should be carefully inspected by examining a representative number of individual pieces. All items should be accepted or rejected on this basis.

Dismantled equipment, including pipelines, shall not be reassembled until inspected and passed. However, if the inspector is not available, it may be reassembled, in time to begin production, at the time stated in the advance notice of production hours (sec. 6.3).

Preoperative sanitation inspection may be made by one or more inspectors depending upon plant's size and complexity, and effectiveness of its routine cleanup program.

In processing departments under normal inspection (sec. 6.20), the inspector shall spot check areas and/or equipment once or twice a week, withhold inspection when acceptable standards are not attained, and notify his supervisor immediately. Operations may be allowed again only when inspector's reinspection, by spot checking, shows deficiency correction.

(d) Record

Each inspector shall have the "trim helper" record on MP Form 514 condemned carcasses in the appropriate blocks and all carcasses retained for veterinary examination under the word "retained" entered in the remarks space.

(1) Plant rejects. Unopened carcasses rejected by management before inspection shall be condemned and recorded on MP Form 514 under "other." The statement "Rejected by Plant Management" shall be entered under remarks. Plants desiring an official disposition of these carcasses must provide assistants for handling them and adequately lighted rack(s) in a place approved by the inspector in charge.

The inspector in charge or his designee will examine and dispose of such carcasses according to regulations. He will record condemned carcasses on an MP Form 514, maintained for this purpose only. Carcasses not condemned will be returned to the line by plant employees for evisceration and inspection.

Above operations will be conducted in an orderly and sanitary manner.

(2) Unlisted conditions. Carcasses condemned for unlisted abnormalities or diseases shall be recorded on MP Form 513, 514, and 514-1, under "remarks" or "other" with condemnation reason.

(e) Retained Product

When product is retained for further inspection, identity and wholesomeness should be preserved. Identity can be maintained by keeping product under Government lock or seal, and/or by using retained tags. Product wholesomeness can be maintained by preventing contamination, dehydration, and decomposition with plastic bags, slush ice, or other (refrigeration or freezing) means. If necessary, samples of retained product may be sent to the laboratory (see Part 23).

(f) Systemic Condition

When a systemic condition is evident, carcass and viscera must be condemned.

(g) Liver Condemnation

Livers with the following diseases or abnormalities must be condemned:

1. Fatty degeneration--characterized by well defined light spots. Livers with a uniform yellow color, due to excessive fat deposits (fatty infiltration), are considered wholesome. They are commonly found in fat birds, especially fowl, and occasionally fryers.
2. Extensive petechiae or hemorrhages. The typical "paint brush" appearance is considered insignificant.
3. Inflammation, abscess, necrosis.
4. Cirrhosis, tumor, cyst. Livers with one large cyst or several small cysts shall be condemned.
5. Discoloration--caused by gall bladder or bile duct disorders, postmortem changes, etc.
6. Specific disease (enterohepatitis).
7. Contamination--from intestinal contents or noxious materials.

(h) Kidney Condemnation

Kidneys shall be removed from carcasses showing:

1. Renal or splenic pathology.
2. Hepatic lesions causing liver condemnation.
3. Conditions requiring condemnations of all viscera.
4. Airsacculitis--when carcass or its posterior part is salvaged.

(i) Contamination

Carcass and/or part disposition shall be according to regulations (P-381.91). Fecal, ingesta, or bile contamination must be promptly removed by washing and/or trimming. Contamination of carcass cut surfaces and internal parts must be removed by trimming.

(1) Salvage operation. Contaminated product may be salvaged, provided (1) adequate facilities and personnel are available, and (2) procedures, approved by area supervisor, are always done sanitarily.

(i) Facilities.

1. Salvage station. It should be in the eviscerating area and have adequate space for a sanitary and effective operation.
2. Retain rack. Each station shall have adequate retain racks in rows and high enough to prevent cross contamination of suspended carcasses.
3. Trough or table. A trough or table section with a steep, sloping top, drained into a gutter or other drainage facility, is necessary. A stainless steel grill for dropped hand tools is desirable over the table or trough.
4. Singer.
5. Containers. Vats, tanks, or other suitable containers for chilling product. Knife rack or stand.
6. Spray nozzle with proper fittings to clean carcasses.
7. Gooseneck or other acceptable facility for washing hands and tools.
8. A minimum of 50-foot candles of light.

(ii) Procedure.

1. After viscera removal, the trimmer may hang contaminated carcasses (by the neck) on designated area of retained rack.
2. Carcasses are then transferred from retain rack to salvage station, where they are suspended with anterior end up to prevent contamination during washing and trimming.
3. External carcass surfaces will be thoroughly washed before cutting.
4. Salvage must be done (a) by properly trimming contaminated tissues, (b) without cutting into body cavity and opening cut edges.
5. Controls for salvage operations will be determined by the product handling capabilities at the salvage station and not at the individual inspection station. If retain racks are filled either at the inspection station or the salvage station, inspectors in charge should allow plants the option of disposing of contaminated birds, or adjusting the production rate. Birds disposed of by the plant should be recorded under "other" with a notation that the plant took the action. Inspectors in charge should not set an arbitrary limit on number of birds to be held at the inspection or salvage stations, but rather should be guided by good sanitary practices. Guidelines for judging efficiency of this operation could be significant loss of body temperature, drying of the skin surfaces and/or discoloration of carcasses.
6. Salvaged parts must be chilled immediately (with crushed ice in continuously drained containers).

(iii) Inspector's responsibility. The inspector in charge must assure that all requirements are met and only wholesome product is saved for food purpose. A plant failing to comply with this section will discontinue salvage operations.

(2) **Overscald.** It should not be confused with hard scald. In overscald the skin slips from the meat, and the intestine may appear cooked.

Carcasses or parts partially cooked by singer or other causes shall be condemned and recorded as overscald.

(j) Bruises; Tears

Trimming bruises, hemorrhages, or tears requires judgment based upon extent, nature, and practicability of trimming to meet ready-to-cook requirements. The following guides

apply to ready-to-cook product only, and not to grading standards:

1. Entire carcass shall be condemned when a bruise or hemorrhage is associated with systemic disturbance.
2. When a condition is localized, the carcass may be passed for food after removal and condemnation of affected part(s).
3. Areas, showing blood clumps or clots in superficial tissues--between skin layers or superficial muscles (wing vein rupture), loose subcutaneous tissue, along blood vessels, etc.--may be slit and clots completely washed out before the part is passed for food. When blood clumps extend into muscles, affected part(s) shall be removed and condemned.
4. Areas with slight reddening shall be handled according to section 381.89 of the regulations.

(1) Breast blister. Although inflammatory tissue adheres tightly to keel bone, affected tissues must be removed.

Removal of breast blisters or other abnormalities before inspection is not permitted since it may affect carcass disposition.

Carcass chilling is not allowed before blister removal, except when carcasses are retained several hours for reinspection, or when blister-affected carcasses belong to lots of

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(b) Thermocouples

They may be used to record temperatures. However, their accuracy shall be checked against an official (standard) thermometer. Placing thermocouples in product shall be under inspector's supervision.

18.5 LOT INSPECTION; SAMPLING

Sampling finished product is necessary to assure compliance with regulations, approved fabrication procedures, and labeling. Thus, the inspector shall sample production lots, as required, and submit samples to the laboratory for analytical verification of product composition (fat content, added water, restrictive additives, etc.).

Inspector's supervisor should assure that product sampling is adequate and should periodically take check samples for laboratory analysis.

18.6 APPROVED QUALITY CONTROL

(a) Plant

Management may develop quality control systems to assure product compliance. Such systems have been very effective in various operations (canning, curing and smoking, sausage preparation, etc.).

To obtain approval to use a quality control system, management should:

1. Develop effective control procedures for all or some production phases to assure product compliance with regulations and approved fabrication methods.
2. Through the inspector, submit detailed procedure description to STS-SDS for approval. Provide copy of approved procedure for inspector's file.
3. Apply approved procedure in all details to respective production.
4. Designate product lots or groups for sampling.
5. Randomly select required number of samples according to applicable sampling plan.
6. Inspect samples and obtain laboratory results.
7. Classify defects according to defect criteria and laboratory results with sample zones (limits).
8. Keep records current for inspector's review.
9. Take required action (retain, rework, resample, etc.) to bring product lots represented by sample into compliance.
10. Reinspect retained and/or reconditioned lots according to applicable criteria.
11. Change sampling plans to reflect current production control requirements.

(b) Inspector

When plant uses an approved quality control system, inspector's responsibility does not cease. He shall monitor plant's adherence to and effectiveness of such control, as outlined in the following subparts.

The inspector shall:

1. Review, evaluate and recommend approval or disapproval of plant quality control.
2. Familiarize himself with details of approved procedure.
3. Monitor plant adherence to procedure and evaluate its effectiveness.
4. Verify proper lot designation, sample size, and random sampling.
5. Check defects or laboratory results classification.
6. Submit verification samples, correlate, and discuss results with plant management.
7. Frequently check records to verify results.
8. Assure adequacy of corrective action and proper disposition of retained product.
9. Evaluate procedure for sampling current production.
10. When plant refuses to adhere to approved procedure, void approval, revert to lot inspection and notify supervisor.

BONELESS MEAT REINSPECTION (MEAT)

Subpart 18-B

(Regs; M-318; P-Subpart O)

18.9 PRODUCT

All fresh or cured skeletal meat from carcasses and heads of cattle, calves, sheep, goats, swine, and equines shall be reinspected at the originating plants when intended for use in ground or comminuted product or intended to be diced, cubed, or otherwise further prepared for use in meat food products either at the producing plant, another plant, or retail outlets.

18.10 DEFINITION AND EXPLANATIONS

(a) Lot

A lot for inspection is product from one species or type (beef, veal, pork, mutton, etc.). It may be a combination of boneless meat such as from hinds and fores or shank meat and lean trimmings or any combination of single type boneless meat depending upon the established operating procedures. Determination of lot definition is made by the inspector in charge. Wherever practical, the entire shift production of the identifiable item is considered a "lot" for inspection purposes. For control purposes in large operations, the product from each boning line may be considered a separate lot for inspection when separately identified and separately controlled.

Example 1: All boneless product from one line goes into a combo container(s) as one lot.

Example 2: The boneless product from four lines merge together into combo bins as one lot.

Example 3: The boneless meat from four lines each go into separate combo bins at the end of each line. The only identification is "50/50 boneless beef." The combo bins go into common storage as one lot.

Example 4: The boneless meat from four lines each go into separate combos as in example 3 and each line is identified and controlled separately. In this case the inspector may consider each line a separate lot.

Example 5: Meat from one or more boning lines goes into three separately marked combos. One combo is "shank meat," one "60/40," and the other "80/20." These are codes to indicate percent lean and should be considered separate lots for inspection.

Example 6: The plant makes mostly pork sausage chubs but some links. Hogs are boned "hot" with all meat going directly to a chopper. On special order, certain pieces are taken from the main line to make links in another room. All of the boneless pork on each shift should be considered one lot.

(b) Low Volume

A low volume item is the product from a small operation within a plant that requires full-time inspection but the total boneless meat produced is less than 1,000 pounds in a plant shift.

Boneless meat in plants on patrol assignments will be inspected the same as, and considered to be, low volume items regardless of volume.

Example of a low volume item: A plant produces a considerable volume of ground beef. Most of the boneless meat used is from boxed, previously inspected domestic and imported product that does not require formal reinspection. The plant also breaks some carcasses for a limited wholesale cut business. The trimmings from this small cut up operation consisting of 200-800 pounds are also used in the

ground beef and must be reinspected. This may be handled as a low volume item.

(c) Sample and Sample Unit

"Sample" in this section generally refers to the total pounds of meat examined for defects. "Sample Unit" is either 12 pounds for lot inspection or 30 pounds for online control inspection, "low volume" or patrol inspection taken at one time. The total of all the sample units comprises the sample. When the available meat at the time of inspection is less than a normal sample unit, special explanation is made for applying unit and cumulative sample allowances.

(d) Sampling Procedure and Random Sampling

If obvious critical defects are present when samples are being selected the lot should be rejected without complete formal inspection. When this condition exists the defects should be collected, shown to, and discussed with plant management. Document the condition by writing a brief explanation on an MP Form 450 or 450-1 and file for 1 year. When critical defects cannot be easily found the inspector should select samples by preselecting areas or cartons using random number cards or tables or predesigned numbered charts he has devised for specific containers. If, after this preselection of sample sites, critical defects are apparent, the lot should be rejected whether or not the critical defects would have been collected from the preselected sample sites. It is expected that plants will attempt to remove all defects even though the sampling plans accept certain numbers. Sample allowances are not definitions of acceptable lot defect levels.

(e) Patrol Inspections

These instructions do not specify how many visits are to be made to plants on patrol assignments. Appropriate procedures are to be applied whenever visits are made. An example inspection for a patrol assignment is included. "Low Volume" procedures apply for patrol inspections regardless of volume.

18.11 PROCEDURES

The reinspection procedures consist of MPI Lot Inspection and MPI Online Control Inspection. MPI inspection activities and requirements for plant activities are explained. Specific adaptations are made for "low volume" items and small "hot boning" operations where assigned MPI personnel are minimal. Inspection duties in plants covered by patrol assignments are included. Provision is made for increased or reduced MPI sampling.

Definitions of defects are contained in Charts 18.1 and 18.1A. Sampling plans and acceptance criteria for "lots" are prescribed in Table 18.1. Sample plans and acceptance criteria for MPI Online Control Inspection are on MP Form 450-1.

(a) MPI Lot Inspection

The plant is allowed to ship product without restriction until an MPI rejection is made according to the sample criteria.

(1) Inspector. The inspector shall:

a. Inspect at least four lots per shift from lots assembled or in production unless production is less than 4 lots. Sampling should be biased toward those lots suspected of being out of compliance. Product may be shipped prior to sample inspection until a rejection is made. After a rejection all product is held and must be inspected and passed before shipping. (See g & h below.)

b. Determine the sample plan from Table 18.1 from the lot size based on either assembled lot (see lot definition) or the known average production lot.

c. Randomly select the required number of cartons from the completely assembled lot in proportion to the different markings (when applicable) or randomly select the required 12-pound sample units at random times during the shift production of the lot to accumulate the required number of sample units. The sample units must be kept separate so that individual 12-pound samples can be evaluated. The entire sample is accumulated in a lock box or retain cage until inspection is made.

d. Examine sample units thoroughly, classify observed defects according to Charts 18.1 and 18.1A, and determine acceptance or rejection according to prescribed criteria. Require removal of scoreable defects, other than minor, from sample units. Sample units drawn during production are accumulated and evaluated at or near the end of the shift or individual lot production. If one item (see lot definition) is partly diverted for further processing and partly for shipping the inspector may select all sample units from either portion based on total production of the item or he may take part of the samples from each portion. The inspector must be satisfied there is no measurable difference in defects between portions if the inspector limits sample to one portion.

e. Sample a rejected, reconditioned lot using the next higher sampling plan number (Table 18.1) than indicated by the lot size; however, use defect limits of the sampling plan for the actual lot size to determine acceptance or rejection of the reconditioned lot.

f. Complete MP Form 450 or 450-1 as applicable, for all inspections. Keep forms on file for 1 year. If supervision does not require other use, discard the extra copy of the form or separate copies in advance and use the unused copy for the next inspection.

g. If a rejection is made, assure that all rejected boneless meat on hand is reconditioned and reinspected according to (e) above. Any finished product made from a lot of boneless meat rejected because of critical defects such as ingesta, off condition, pathological defects, or because of toxic substance, is MPI retained and disposed of according to public health impact determined by each circumstance. This situation may occur if boneless meat is being utilized while inspection is online and the production is not rejected until after several samples are evaluated.

h. After a rejection, retain all boneless meat from all lots on hand, produced during the shift in which the rejection was found, until inspection is made and product passes and until four consecutive complete days' operations result in no rejections. Plant should not be allowed to change into small lots. Limit lot definition to two lots per shift unless the inspector has established normal inspection lots of more than two lots per shift. After four consecutive days with no MPI rejections allow free flow of product with inspection at the minimum rate as in a. above. The number of lots inspected or the sample plan number should be increased whenever the product is suspect. If there are more than three MPI rejections within 3 months, retain all product for inspection before shipping or inplant use and consult the supervisor for guidance to initiate more severe regulatory action, such as holding all product daily until inspected and passed for 12 consecutive production days. Periodic review of records of inspection results and of product should be made to establish whether overall production appears satisfactory. A good producer should average less than one rejection in 120 MPI lot inspections.

i. For "low volume" items and plants on patrol assignments, the sampling rate is one 30-pound sample on each visit or the amount of boneless meat on hand at the time of visit if this is less than 30 pounds. Proceed as follows:

1. Draw 30-pound sample units and accept or reject on the basis of the cumulative and individual 30-pound sample unit criteria according to MP Form 450-1. Accumulate through Sample No. 4, then restart the series with Sample No. 1. Product is allowed to be shipped without restriction as long as rejection criteria are not reached (see 2).

2. If, at the time of inspection, less than 30 pounds of product are on hand, record the sample unit weight to the nearest whole pound, and examine for defects. If any scoreable defects are found in a sample unit of less than 30 pounds, consider the product on hand rejected but release it after all defects have been removed. Accumulate the odd pound sample units and defects. If the number of defects does not exceed the cumulative number allowable for the next lower 30-pound increment in the series of four sample units, remain on this procedure without restriction other than rework of product on hand. If the defect cumulative limit for the next lower whole increment is exceeded, however, the process is rejected and the plant must hold all product for inspection before release for a minimum of 4 days. Inspection personnel may not be immediately available. Advance arrangements should be made to help insure inspector availability.

3. When a plant is on hold for inspection, the inspection will be made according to MPI lot inspection procedure, Table 18.1, using 12-pound sample units. If production is less than 36 pounds, accept product on hand if there are zero sample defects. Return to 30-pound sample unit cumulative sampling after 4 consecutive days of MPI lot inspection without a rejection. When on normal 30-pound sample unit inspection and the available product for inspection is less than 30 pounds, a single defect is a rejection of the product on hand but not necessarily a rejection of the process. See the following example.

Example inspection for a low volume item or plant on patrol: First sample unit: 20 pounds. One minor defect found. All 20 pounds must be reworked and product is released. Plant is not placed on "hold product for inspection." Second sample unit: 30 pounds from a total of 50 pounds on hand. One minor defect is found. No rework is necessary. Product flows freely. Third sample unit: 25 pounds. Three minor defects found. The 25 pounds must be reworked and then released. The total accumulated pounds of sample is now 75. The next lower increment (60 pounds) allows only four minor defects therefore the process is rejected and "hold for lot inspection" is in effect beginning on the next days' operation. All lots produced the day of the rejection also must be inspected and passed before release.

If the first sample unit in a four sample unit series is less than 30 pounds, the process is rejected if any major or critical defects are found or if three or more minor defects are found and plant is placed on "hold product for inspection."

j. For "hot boning" operations proceed as follows:

1. Hot boning operations, where boned meat is available in containers or on a boning table, belt, or conveyor, are to be sampled a minimum of four times per shift. Samples should be alternated between head meat, back, or other meat, "lean trimmings," and "fat trimmings" as applicable. Select 30-pound sample units and proceed as in (i) above for "low volume." Accumulate a minimum of four samples per shift. Samples are to be inspected and evaluated when drawn. Plant personnel should maintain their own control and should not wait for the MPI inspectors' results before taking necessary corrective actions. MPI inspectors however should warn plant management whenever defects appear to

be evident. Product is allowed to flow freely until MPI rejection is made. On most one-man assignments the inspector has time to leave the kill floor to obtain and make a 30-pound sample unit inspection. If the inspector feels that kill floor duties do not permit time for sampling, the problem must be resolved by local supervisory action.

2. If deboned meat is not removed from the rail (on-rail boning) but dropped directly to a chopper or grinder the sample is obtained by estimating a 30-pound portion of hanging meat. The areas examined should be randomly selected except that if one area of the boned carcass shows high defect incidence, the sampling should be biased so as to encourage plant actions to correct the problem.

3. Actions when a rejection is reached. If the MPI inspector sample evaluation results is a reject, whether cumulative or individual, all deboned meat in the boning or preparation areas must be reexamined by plant personnel and reoffered for inspection as one lot. All chopping or grinding is suspended until inspection is made and the deboned meat is accepted. If desired, all rejected, deboned meat may be removed from working areas, placed in proper storage, and MPI retained for later rework. Any finished product made from a lot of boneless meat rejected because of critical defects, such as ingesta, off condition, pathological defects, or because of toxic substance is MPI retained and disposed of according to the public health impact determined by each circumstance.

Subsequent product must be inspected a minimum of eight sample units per shift and MPI passed for four complete, consecutive working shifts with no rejections before normal inspection resumes. If any rejections occur within this four shift period, all grinding or chopping is suspended and the deboned meat must be lotted according to all available containers or table area or combination thereof. The MPI inspector will then inspect each such accumulated "lot" using a minimum of three 12-pound samples and each lot must meet the sample criteria (Table 18.1) before it can be further processed for a period of four shifts without rejection. Then the minimum of eight 30-pound samples per shift (450-1) must meet acceptance criteria for four consecutive shifts before returning to normal lot inspection as previously described herein. Rejected lots may be containerized and retained on premise storage for later rework.

k. Increased Sampling. If rejections occur frequently (more than one in a 6-month period) sampling frequency should be increased as deemed necessary. This applies to regular, low volume, patrol, and hot boning inspections and may result in a decrease in production because of the required absence of the MPI inspector from the kill floor in certain operations. Plants may avoid production interference by producing acceptable product. Each shift (lot) is evaluated based on individual sample unit and cumulative sample defects according to MP Form 450-1 or the current revision thereof, or Table 18.1 as applicable.

1. Reduced Sampling. After 16 consecutive shifts under MPI lot inspection without rejection, the MPI inspector, with approval of the supervisor, may reduce sampling to two 30-pound samples per shift. Patrol assignments may not be applicable to this type of inspection. Accumulate four sample units for acceptance or rejection then restart at sample number one. If a rejection is reached take the same actions as previously described for rejection in (a)(1)h. above. If the rejection is because of cumulative defects, the boneless meat on hand at the time the rejection is reached, must be reworked.

(2) Plant. The plant shall:

a. Provide adequate facilities for inspection.

b. Assure access for product sampling.

c. Provide personnel to assist in handling samples and containers.

d. Assure that all carcasses and parts are practically free of defects before boning.

(b) MPI Online Control Inspection

(1) Inspector. The MPI inspector shall:

a. Assure that plant personnel perform adequate product examination, properly classify and record defects, and carry out their online inspection responsibilities. (See (2)).

b. Select and examine a 30-pound sample unit a minimum of two times daily or whenever he feels it necessary to confirm that product is under good control. All sample results must be recorded on a 450-1 and filed for 1 year.

c. Accept or reject on the basis of sample unit and cumulative sample criteria (MP 450-1). Accumulate four sample units, then restart a No. 1 as in (a)(1),(i). Upon a rejection (either individual or cumulative) proceed as follows:

1. First rejection: The plant should take all necessary actions to make sure product is in compliance. If the inspector is not satisfied with these actions and suspects product to be out of compliance, the inspector should take continual samples and evaluate them until satisfied. If any of these samples causes another rejection, proceed the same as for the second rejection in the following paragraph. If the rejection is the first within 6 months and the plant takes action so that corrections are made and no product out of compliance is released, allow product to move freely but inform plant management of MPI findings, examine available carcasses, and evaluate the entire boning operation.

2. Second rejection. If the MPI rejection is the second within the past 6 months, institute MPI Lot Inspection at once. Product must be held for inspection and may be shipped only after passing MPI Lot Inspection. MPI Lot Inspection procedures must be followed until 4 consecutive days of operations result in no MPI rejections. Then product may move freely subject to (a) MPI Lot Inspection for 12 days after which time Online Inspection is again acceptable if there have been no rejections, and reinstatement is approved by the area supervisor.

3. After reinstatement. If an MPI rejection occurs after reinstatement of online inspection, and a period of 6 months has not passed since the previous MPI rejection regardless of reinspection procedures, revert to MPI lot inspection. Product may be shipped when inspected and passed and may again move freely after 4 consecutive days without rejection. The plant may request consideration for new online control inspection after 30 days.

d. For low volume operations and patrol assignments use above procedures as applicable. The MPI inspector will collect and examine a 30-pound sample unit at least once a day or, if on patrol, a 30-pound sample unit during each visit, or, in either case, available product up to 30 pounds. When inspection of a 30-pound sample unit results in a rejection according to MP Form 450-1 (either individual or cumulative) or when a sample unit less than 30 pounds contains any defects, the inspector will reject all product on hand since the previous sample check and will apply the accumulative procedure in (a)(1)(i),MPI Lot Inspection. The rules and release procedures for "hold product for inspection" apply as explained under lot inspection.

(2) Plant. A plant must have a good history of producing product without rejection for 120 inspected lots or 60 production days, whichever comes

first, in order to be inspected by MPI according to the procedures under MPI Online Control Inspection and in addition must comply with the requirements that follow. A good operating and control procedure is the best method of insuring free flow of product. If plants discover their own problems and take necessary corrective actions to prevent unacceptable product in commerce, regulatory compliance is assured and corrective action by MPI is not necessary. The plant written program must be approved by the area supervisor. As a minimum the plant procedure must include competent personnel to:

a. Assure all carcasses and parts are practically free of defects before boning.

b. Sample product, examine sample units, properly classify defects, and remove scoreable defects.

c. Select sample units from a point close to where product enters the containers.

d. Draw a 30-pound sample unit from each production line or accumulating location at least every half hour (average). A lot may not be shipped unless at least three sample units are evaluated except a lot of less than 90 pounds may be shipped if it is 100 percent examined and all defects removed.

e. Complete MP Form 450-1. Evaluate individual (30-pound) sample unit limits and cumulative total limits.

f. When cumulative defects exceed the limits, the plant must reject, hold, and recondition all of the shifts' production of the item on hand.

g. When defect limits for an individual sample unit are exceeded, reject, hold, and recondition all production of the item on hand produced since the previous acceptable sample unit.

h. If the individual reject sample unit also causes cumulative defects to exceed limits, reject, hold, and recondition all of the shift production of the item on hand except where assignable cause is evident. See the following examples:

Example 1: Three sample units of 30 pounds each are examined and one minor defect is found. The fourth sample unit contains six minor defects. The cumulative total of seven is acceptable but sample number four exceeds the maximum of four for individual sample units. Product is retained back to the time sample unit number three was drawn. If this product cannot be identified, all of the item produced is retained. Usually there is a known production rate so that cartons or combo bins can be identified.

Example 2: The same situation exists as in example one except eight minor defects are found in the fourth sample unit. Now the cumulative as well as the unit defect maximums are exceeded. The number of defects in the fourth sample unit are so much more than the number in the first three sample units that there may have been an assignable cause such as meat from a different source. If this were found to be true, product would be retained back to the time of the third sample and the situation must be clearly explained on the 450-1.

Example 3: The eighth sample unit has been examined and the cumulative total of (all minor) defects is 12. The ninth sample unit contains six minor defects. In this case the cumulative total and individual sample unit limits are exceeded. All production of the item is retained. There is no apparent assignable cause but the level of defects is generally high.

i. Reinspect reconditioned product as prescribed under MPI Lot Inspection. (a), 1., g.

j. When a rejection is made proceed to recondition but notify the inspector who may also choose to reinspect the reconditioned lot. Product may continue to be shipped.

k. If the plant wishes to establish a procedure more restrictive than described above, the procedure, including definitions of defects and actions to be taken, should be submitted in narrative form for approval. If suitable history is established plants may submit different control plans for approval. Supporting data must also be submitted and verified by the inspector in charge.

Table 18.1 - Sampling Plans

Lot size (pounds)	Plan No.	Step No.	Sample units	Major		Critical		Total	
				Ac	Re	Ac	Re	Ac	Re
1,000 or less	5[1]	-	3	0	1	0	1	1	2
8,000 or less	10	-	6	0	1	0	1	5	6
8,000 to (but not including) 24,000	15	1	9	0	2	0	1	4	8
		2	3	-	-	-	-	-	-
Total.....			12	1	2	0	1	8	9
24,000 to (but not including) 60,000	20	1	15	0	3	0	1	6	12
		2	15	-	-	-	-	-	-
Total.....			30	2	3	0	1	18	19
60,000 to (but not including) 240,000	25	1	22	0	4	0	1	9	16
		2	25	-	-	-	-	-	-
Total.....			47	3	4	0	1	26	27
240,000 to (but not including) 500,000	30	1	27	0	4	0	1	10	19
		2	40	-	-	-	-	-	-
Total.....			67	4	5	0	1	35	36
500,000 to (but not including) 1,000,000	35	1	33	0	5	0	2	12	21
		2	56	-	-	-	-	-	-
Total.....			89	5	6	1	2	45	46
500,000 to (but not including) 1,000,000	40[2]	1	40	0	6	0	2	15	25
		2	71	-	-	-	-	-	-
Total.....			111	6	7	1	2	56	57
1,000,000 and over	45	1	72	3	7	0	2	32	41
		2	48	-	-	-	-	-	-
Total.....			120	6	7	1	2	60	61
1,000,000 and over	50[2]	1	120	4	9	0	3	51	63
		2	100	-	-	-	-	-	-
Total.....			220	11	12	2	3	105	106

1/ To be used only upon request of plant management or import broker.
2/ Alternate plan for the applicable lot size for reinspection of rejected lots and for lots consisting of numerous marks.

Part 18
Chart 18.1 - Defect criteria (for sample unit).
Meat from cattle, calves, sheep, goats, and equines.

Defects			
Type	Description	Class	Code
Blood clots	Less than 1½" in greatest dimension	*Insignificant	
	1½" to 6" in greatest dimension.	Minor	100
	More than 6" in greatest dimension, or numerous (over 5) minor blood clots in one sample unit (1/) not seriously affecting product usability.	Major	101
	One or more of a number or size seriously affecting product usability.	Critical	102
Bruises	Less than 1" in greatest dimension and less than ½" deep.	*Insignificant	
	1" to 2½" in greatest dimension or ½" to 1" deep.	Minor	100
	More than 2½" in greatest dimension or more than 1" deep, or numerous (over 5) minor bruises in one sample unit (1/) not seriously affecting product usability.	Major	101
	One or more of a number or size seriously affecting product usability	Critical	102
Bone fragments	(1) Thin bone scrapings less than 1/32" thick x 1/8" wide x 3" long attached to muscle tissue. (2) Thin flexible bone slivers, either attached to or detached from muscle tissue less than 1/4" wide and 3/4" long. (3) Thin bone fragments or chips either attached to or detached from muscle tissue that crumble easily and are less than 3/4" in greatest dimension.	*Insignificant	
	Less than 1½" in greatest dimension.	Minor	150
	1½" or more in greatest dimension, or numerous (over 5) minor fragments in one sample unit (1/) not seriously affecting product usability.	Major	151
	One or more of a number or size seriously affecting product usability.	Critical	152
Bone slivers (from rib)	Less than 3" long and less than 1/4" wide and flexible bone chip from a rib end more than 3/4" in greatest dimension that is thin and crumbles easily, and with or without attached muscle tissue.	Minor	150
Detached cartilage, ligaments	Less than 1" long	*Insignificant	
	1" or more long and free of muscle tissue. (See also bone slivers).	Minor	200
	Numerous (over 5) minor defects in one sample unit (1/) not seriously affecting product usability.	Major	201
	Defects of number seriously affecting product usability.	Critical	202
Extraneous material	Minute specks or dust. If affecting product usability, score them under codes 800, 801, 802. Pieces of plastic or paper wraps or any soft material less than ½".	*Insignificant	
	Paper or plastic wraps ½" to 7 square inches; a single piece covering an area equal to that of a circle 1/8" to 1/2" in diameter; a wild oat or other grass beard over 3/8" long or 3 or more pieces of wild oats or grass beards 1/8" to 3/8" long on one meat piece and without inflammation.	Minor	300
	Blunt piece of wood 1" or more long; paper or plastic over 7 square inches; single piece of material covering an area greater than that of a circle with a diameter exceeding ½"; small insects without insanitation. Numerous (over 5) minor defects in a sample unit not seriously affecting product usability; any substance causing minor bodily irritation or discomfort (chemicals, hard objects, etc.).	Major	301
	Any substance causing injury or illness (poisonous or toxic chemicals, sharp pieces of metal, glass, hard plastic, etc.); large insects, insects associated with insanitation, or any material of number or size seriously affecting product usability.	Critical	302

* * *

Note: See footnote at end of chart.

Chart 18.1 - Continued

Defects			
Type	Description	Class	Code
Hair Hide Wool	Hide (with or without hair) or wool less than ½" in greatest dimension. A total of five to 10 single strands of hair or wool. Total number of hairs, divide by 10 and round off to nearest whole number to determine total hair defects. For example: 34 hairs equal 3 defects and 35 hairs equal 4 defects. When second step is necessary, total number of hairs in step one and two, divide by 10 and round off to nearest whole number as described above. Also a cluster of hair (strands too numerous to count) in one area.	Minor	400
	Hide (with or without hair) or wool ½" or more in greatest dimension; numerous (over 25) single strands of hair in one sample unit (1/); numerous (over 5) clusters of hair in one sample unit (1/), provided none of above seriously affect product usability.	Major	401
	Hair, hide or wool of amount seriously affecting product usability.	Critical	402
Ingesta	Amount equal to area of a circle ½" or less in diameter.	Major	251
	Amount equal to area of a circle more than ½" in diameter.	Critical	252
Off condition		Critical	452
Parasitic lesions	Parasites not transmissible to man. One, two, or three closely associated lesions on one piece of meat - Score as one lesion (ovine only). First lesion found in a sample.	Minor	500
	Each succeeding parasitic lesion in the sample.	Major	501
Pathologic lesions	Any lesion (not evident on post-mortem inspection) not seriously affecting product acceptability.	Major	501
	Any lesion unless excepted as noted under Code 501.	Critical	502
Stains, Discolored areas	Very light stains of any size or stains covering an area less than that of a circle ½" in diameter	*Insig-nificant	
	Equal to area of a circle ½" to 1½".	Minor	600
	Equal to area of a circle greater than 1½" in diameter; numerous (over 5) minor stains in one sample unit (12 pounds) not seriously affecting product usability (1/).	Major	601
	Minor or major areas of a number seriously affecting product usability.	Critical	602
Other	Defect that individually or in aggregate affects product appearance, but not its usability.	Minor	800
	Defect that individually or in aggregate materially affects product usability.	Major	801
	Defect that individually or in aggregate seriously affects appearance or usability of product.	Critical	802

*No significance in product wholesomeness; do not score.
1/ Do not score as minor also.

Chart 18.1-A - Defect criteria (for sample unit). Meats from swine carcasses.

Defects			
Type	Description	Class	Code
Blood clots	Less than 1½" in greatest dimension	*Insignificant	
	1½" to 6" in greatest dimension.	Minor	100
	More than 6" in greatest dimension, or numerous (over 5) minor blood clots in one sample unit (1/) not seriously affecting product usability.	Major	101
	One or more of a number or size seriously affecting product usability.	Critical	102
Bruises	Less than 1" in greatest dimension and less than ½" deep.	*Insignificant	
	1" to 2½" in greatest dimension or ½" to 1" deep.	Minor	100
	More than 2½" in greatest dimension or more than 1" deep, or numerous (over 5) minor bruises in one sample unit (1/) not seriously affecting product usability.	Major	101
	One or more of a number or size seriously affecting product usability	Critical	102
Bone fragments	(1) Thin bone scrapings less than 1/32" thick x 1/8" wide x 3" long attached to muscle tissue. (2) Thin flexible bone slivers, either attached to or detached from muscle tissue less than 1/4" wide and 3/4" long. (3) Thin bone fragments or chips either attached to or detached from muscle tissue that crumble easily and are less than 3/4" in greatest dimension.	*Insignificant	
	Less than 1½" in greatest dimension.	Minor	150
	1½" or more in greatest dimension, or numerous (over 5) minor fragments in one sample unit (1/) not seriously affecting product usability.	Major	151
	One or more of a number or size seriously affecting product usability.	Critical	152
Bone slivers (from rib)	Less than 3" long and less than 1/4" wide and flexible bone chip from a rib end more than 3/4" in greatest dimension that is thin and crumbles easily, and with or without attached muscle tissue.	Minor	150
Detached cartilage, ligaments	Less than 1" long	*Insignificant	
	1" or more long and free of muscle tissue. (See also bone slivers).	Minor	200
	Numerous (over 5) minor defects in one sample unit (1/) not seriously affecting product usability.	Major	201
	Defects of number seriously affecting product usability.	Critical	202
Extraneous material	Minute specks or dust. If affecting product usability, score them under codes 800, 801, 802. Pieces of plastic or paper wraps or any soft material less than ½".	*Insignificant	
	Paper or plastic wraps ½" to 7 square inches; a single piece covering an area equal to that of a circle 1/8" to 1/2" in diameter; a wild oat or other grass beard over 3/8" long or 3 or more pieces of wild oats or grass beards 1/8" to 3/8" long on one meat piece and without inflammation.	Minor	300
	Blunt piece of wood 1" or more long; paper or plastic over 7 square inches; single piece of material covering an area greater than that of a circle with a diameter exceeding ½"; small insects without insanitation. Numerous (over 5) minor defects in a sample unit not seriously affecting product usability; any substance causing minor bodily irritation or discomfort (chemicals, hard objects, etc.).	Major	301
	Any substance causing injury or illness (poisonous or toxic chemicals, sharp pieces of metal, glass, hard plastic, etc.); large insects, insects associated with insanitation, or any material of number or size seriously affecting product usability.	Critical	302

* * *

Note: See footnote at end of chart.

Chart 18.1-A - Continued

Defects

Type	Description	Class	Code
Skin Hair Hair roots	Skin (with or without hair or visible hair roots) individually or in aggregate less than 1 square inch.	*Insig-nificant	
	Skin (with or without hair or visible hair roots) individually or in the aggregate 1 square inch to 3 square inches. A total of 2 or 3 single strands of hair or 5 to 10 visible hair roots. Total number of hairs or visible hair roots in sample divide by 3 for hairs or 10 for visible hair roots and round off to nearest whole number. For example, 10 hairs equal 3 defects. Thirty-eight visible hair roots equal 4 defects. When second step is necessary, total the hair or visible hair roots from both steps. Also, a cluster of hair or visible hair roots (strands too numerous to count) in one area.	Minor	400
	Skin with or without hair or visible hair roots individually or in aggregate over 3 square inches; numerous (over 13) single strands of hair in one sample unit (1/), provided none of above seriously affect product usability.	Major	401
	Hair, skin, or visible hair roots seriously affecting product usability.	Critical	402
Ingesta	Amount equal to area of a circle 1/2 inch or less in diameter.	Major	251
	Amount equal to area of a circle more than 1/2 inch in diameter.	Critical	252
Off condition		Critical	452
Lips Ear canals Teeth Kidney Liver	Any sample unit containing tooth or teeth. Ear canal(s), lip with or without teeth marks, piece(s) of kidney or liver.	Major	501
Pathologic lesions	Any lesion (not evident on post-mortem inspection) not seriously affecting product acceptability.	Major	501
	Any lesion unless excepted as noted under Code 501	Critical	502
Stains, Discolored areas	Very light stains of any size or stains covering an area less than that of a circle 1/2 inch in diameter.	*Insig-nificant	
	Equal to area of a circle 1/2 inch to 1 1/2 inch.	Minor	600
	Equal to area of a circle greater than 1 1/2 inch in diameter; numerous (over 5) minor stains in one sample unit (12 pounds) not seriously affecting product usability (1/).	Major	601
	Minor or major areas of a number seriously affecting product usability.	Critical	602
Lung tissue	Any amount.	Critical	652
Other	Defect that individually or in aggregate affects product appearance, but not its usability.	Minor	800
	Defect that individually or in aggregate materially affects product usability.	Major	801
	Defect that individually or in aggregate seriously affects appearance or usability of product.	Critical	802

*No significance in product wholesomeness; do not score.

1/ Do not score as minor also.

(3) Soy Product. The inspector must assure that they are properly used. Approval of soy flour, soy protein concentrate, and isolated soy protein as ingredients of sausage is based upon their binding properties. These substances are also permitted as ingredients of other meat food products--chili, stew, loaves (other than meat loaves), soups, etc.

Soy products with appearance of diced, flaked, or ground meat, even though labeled as "soy flour," "isolated soy protein," and "soy protein concentrate" should not be used in meat food product unless specifically approved by STS-LP. This Staff will approve labels for emulsified cooked sausages containing textured or structured soy flour, isolated soy protein, and soy protein concentrate, provided the textured or structured products are finely divided as a part of the emulsifying process. When so used, the labeling declaration of the soy products should not show the words "textured" or "structured."

In all cases, soy products must be identified by their common or usual name in the ingredients statement and/or by byproduct name, as required by regulations or label approval. Soy bean derivatives for which the category or protein content is questionable should be submitted to the laboratory. Soy protein concentrate, soy flour, and isolated soy protein are practically indistinguishable by visual examination. They may also closely resemble sodium caseinate, nonfat dry milk, and certain cereals. Therefore, if a plant stocks more than one type of soy product, additional controls are required. These include developing, with the plant, a procedure for confining soy products for positive identification and maintaining daily records showing amounts of soy bean derivative used and type of product prepared.

(b) Formula Control

Approved label formulas must be controlled at plant level. Since all products cannot be verified by laboratory analysis, the inspector should check the weight, calculate the percentage of ingredients, and assure that product is properly formulated.

The inspector should also check plant records of ingredients and assure that amounts used correspond to product produced.

(c) Confidential Formula

Ingredients with confidential formulas (spice mixtures, seasonings, etc.) may be used in products, provided they are specifically identified in the label approval. Confidential formulas are reviewed for acceptability, and label's ingredient statement verified for accuracy. The inspector's responsibility limits use of such materials to identified brands in specified amounts. Substitutions are not permitted without approval.

Exception! Certain materials--mayonnaise, ketchup, bakery products, cheese, margarine, etc.--have an official standard of identity (or composition) registered with FDA. When used in products, a confidential formula for each is unnecessary for label approval. Different brand name products may be interchanged without STS clearance. However, substituted product must carry the same product name--mayonnaise, ketchup, etc.

(d) Material Rejection

Nonfood ingredients rejected for use may be removed from the plant or destroyed at the plant. If removed FDA and local health authorities should be notified.

SAUSAGE (MEAT)

Subpart 18-E

(Regs: M-318, 319)

18.23 FRESH PORK SAUSAGE

Sampling, Compliance

* When surveillance is limited, submit occasional samples to laboratory. Take corrective action when percent water in sample exceeds limits in Table 18.1-A.

Table 18.1-A -- Percent of Allowable Water 1/

Product Formula	Maximum Individual Sample Result	Maximum of three Consecutive results
Water	5	3
No Water	2	0

1/ Allowances for water are because of analytical variations and the method of calculating added water in sausage.

* If product is suspected of excess added water, submit two samples from different parts of the lot. Retain if the average is: Four percent or more if water is declared; or 1 percent or more if no water is declared.

18.24 COOKED SAUSAGE

* This section covers cooked sausages subject to fat and/or added water limitations.

(a) Casings

(1) **Vinegar, lactic or citric acid.** Their solutions may be used for acidification purposes. To improve peeling, 5 percent citric acid or 35-40 grain vinegar may be used for spraying frankfurters before or after smoking.

These solutions may be recirculated during the day's operation if they are effectively filtered and are clear. The equipment must be of approved plastic or stainless steel. Spray heads, filters, and pumps must be capable of being dismantled for cleaning. *

(2) **Unapproved Substances.** Animal casings (318.6(b)(2)) preflushed and packed in solutions containing unapproved substances--antibiotics, antioxidants, preservatives, nitrite, nitrate, etc.--are not permitted. When noncompliance is suspected, the inspector should submit samples of casings and solutions to the laboratory.

(3) **Approved dyes.** Artificial casings impregnated with soluble approved dyes may be used for small sausage varieties (318.7(c)(3)). The certification required for coal tar dyes (318.7(c)(4)) should be furnished with each lot of such dye-impregnated casings.

(4) **Color penetration.** Examine artificially colored product. If, within 72 hours after stuffing, product shows color penetration, retain for appropriate disposition. Do not ask laboratory to examine product for color penetration.

(5) **Rework.** This term applies to a fully or partially processed product (not including uncooked trimmings) rerouted for reasons other than unwholesomeness or adulteration (i.e., emulsion residue, product breakage, slicing operations, smoked meats, returns, etc.) and intended for inclusion in cooked sausages, loaves, and similar products. Rework may be used provided it does not adulterate the product, violate its standard of composition, upset the order of predominance of ingredients, or perceptively affect the normal characteristics of the product, and is subject to the following restrictions: *

a. Cooked sausage, meat loaves, may be used in similar products

without limitation.

b. Pieces of cooked and/or smoked meat may be used without limitation if properly identified in the ingredient statement.

* c. Pieces of uncooked, cured pork * from primal parts may be used without * limitation, if properly identified in * the ingredient statement.

d. Bacon may be used in cooked sausages covered by section 319.180 of the regulations. However, it is * limited to 10 percent of the meat; or * meat and meat products; or meat, meat byproducts, and poultry products in a sausage formula.

e. Sausage products in edible collagen casings may be used in similar finely comminuted products without limitation and need not be peeled.

* f. Finished cooked sausage in nat- * ural casings may be used in similar * finely comminuted products without limitation, except sausages in bungs, middles, beef rounds, bladders, or stomachs must be stripped of the casings before use. Also, natural casings of any type that break during the stuffing operations should not be included in emulsions.

g. Semi-dry/dry sausage (other than rework that occurs during stuffing) may only be used in products processed to reach an internal temperature of * 140° F. for 50 minutes, 145° F. for * 5 minutes, or 150° F. or more momentarily. Rework which occurs during stuffing may only be used in subsequent production of semi-dry or dry sausages.

Processors desiring to use rework from semi-dry/dry sausage in other products may submit their written proposal through the area supervisor to STS-ISR.

(b) Precooked Product

Precooked specialty items stuffed in natural casings--pork stomachs, bungs, bladders, etc.--must be reheated to an internal temperature of 150° F. or higher after stuffing.

(c) Ingredient Calculation

The following examples show methods of calculating ingredients in cooked sausage. They are based on 10 per- * cent added water by weight. In * practice "added water" is calculated * amount of water based on standard * protein-moisture ratio. If the cal- * culated amount of ingredients indi- * cates the plant formula may result * in finished product violation, the * inspector should advise plant manage- * ment, observe product preparation, * establish true finished product yield, * calculate the true percentage of * ingredient based on the actual yield, * and if violation is indicated, retain * product and submit samples to the * laboratory. *

Example 1. Cooked sausage (Standard for NFDM 3 1/2 percent; added water 10 percent).

Problem. How much NFDM may be added to a batch containing 400 pounds of meat, seasonings, and other ingredients excluding ice (water) and extenders?

Procedure:

100% - (3 1/2% + 10%) = 86.5% = * 0.865; 400 ÷ 0.865 = 462.4; * 462.4 x 0.035 or 3 1/2% = 16.2. The 16.2 pounds is the weight * of NFDM that may be added if other * extenders are not used. *

Example 2. Regular cooked sausage (ISP = 2 percent or NFDM = 3.5 percent).

Problem. How much NFDM may be used if 4 pounds of ISP are also to be added to a batch with an ingredient weight of 380 pounds (excluding water and extenders)?

Procedure.

1. Determine weight excluding * water and extenders as if the only * extender is ISP. *

2. Find theoretical finished weight: 380 ÷ 0.88 [100 - (10% added water + 2% ISP)] = 431.8 lbs.

3. Find maximum amount of ISP permitted: 431.8 x 0.02 = 8.6 lbs.

4. Find what equivalent amount of * NFDM is permitted after 4 pounds of *

ISP that could be added. The equivalent amount of NFDM = $\frac{3.5}{2}$ x 4 (8.6-4) = 8.05 = 8.1 lbs.

Answer: If 4 pounds of ISP are added, then maximum NFDM that can be added in this formula is 8.1 pounds.

Example 3. Frankfurters

Problem. How much ISP may be added to a batch beginning with 105 pounds of meat seasoning, and other dry ingredients with 2 pounds of NFDM?

Procedure.

1. Find theoretical finished weight as in previous examples: 100 - (3 1/2 + 10) = 86 1/2%. 105 ÷ 0.865 = 121.4 pounds.

2. Find total allowable NFDM: 121.4 x 0.035 = 4.2 pounds.

3. Find equivalent amount of ISP that can be added with 2 pounds of NFDM: 4.2 - 2 = 2.2. Equivalent ISP = $\frac{2}{3.5}$ x 2.2 = 1.3 lbs.

Answer. 1.3 pounds of ISP may be used with 2 pounds of NFDM in the formula.

(d) Corn syrup, sorbitol solids

Corn syrup and/or sorbitol solids are permitted in cooked sausage not to exceed 2 percent alone or in combination.

To determine the maximum amount of corn syrup and/or sorbitol solution permitted, calculate the weight of dry solids permitted and convert to weight of liquid.

Example. Product is to contain corn syrup solids and cereal, or sorbitol and cereal. Weight of ingredients other than water, cereal, and corn syrup solids or sorbitol is 260 pounds.

Problem. Find maximum amount of either corn syrup and cereal or sorbitol and cereal permitted in formulation.

Procedure.

1. 260 pounds = 100% - (10 + 3 1/2 + 2) = 84 1/2%.

2. Solve for finished weight: 260 ÷ 0.845 = 307.7 lbs.

3. Calculate weights allowed:
Corn syrup solids = 307.7 x 0.02 = 6.2 lbs.
Sorbitol solids = 307.7 x 0.02 = 6.2 lbs.
Cereal = 307.7 x 0.035 = 10.8 lbs.

4. If corn syrup is used, consider syrup as 80% dry solids:
6.2 x 0.80 = 7.75 lbs. corn syrup.

5. If sorbitol is in solution, the U.S.P. or N.F. solution is 70% solids:
6.2 ÷ 0.70 = 8.9 lbs. N.F. sorbitol solution.

Remember that water is a part of any syrup or solution. Combinations may be calculated as in examples 2 and 3 of 18.24(c).

(e) Definitions and Explanations for Lot Inspection

(1) Lot. A shift's production of one size and basic formula or specification.

(2) Sampling. Divide monthly (or weekly or daily) production by 35,000 to determine the number of lots to sample for both normal and tightened inspections. However, regardless of production volume, samples must be taken as limited by Table 18.3. Sample the lots most likely to be in violation. Sampling rate may not be increased for the purpose of hastening the return to normal criteria. Select three 1-pound units of finished, unpackaged product. Each unit should represent different batches from one lot (do not composite). The inspector must be familiar with production methods and confirm that operations indicate compliance with approved procedures.

(3) Retail samples. Samples may be taken at retail level as directed.

(4) Records. One scoresheet (MP Form 492) for fat and one for added water must be maintained for all cooked sausage products combined that are subject to both fat and added water limitations. A separate

* scoresheet shall be maintained for added water for cooked sausage not limited by the regulations to 30 percent fat but limited to added water. An added water violation in products with added water and fat limitations would not affect the inspection level or retention of products with only added water limitations.

(5) Zone concept. Sample limits are to allow variation due to normal sampling and analytical error. Product will be in compliance if proper actions are taken.

If a product is on tightened inspection for one factor, (fat or water) a Zone C or D in another factor does not mean retain product. To determine proper inspection criteria laboratory results or other factors must also be accumulated.

(f) Laboratory Results

Sample limits. The laboratory result limits in Table 18.2 are allowed for expected variations due to normal sampling and analytical procedures.

Table 18.2 - Sample limits

Zone	Percent	
	Fat	Added water
A	30.0 - under	10.0 - under
B	30.1 - 30.6	10.1 - 11.0
C	30.7 - 31.1	11.1 - 12.0
D	31.2 - 31.6	12.1 - 13.0
E	31.7 - over	13.1 - over

Table 18.3 - Sampling criteria

Normal		Tightened	
Minimum	Maximum	Minimum	Maximum
One a month	One a shift	One a week	One a shift

(g) Lot Inspection Procedure

Under Lot Inspection, two standards for sample results are used--normal acceptance criteria and tightened acceptance criteria. Normal acceptance criteria are used for the first sample and continued when the samples consistently meet these criteria; tightened acceptance criteria are used when samples fail acceptance under normal criteria and are continued until results cause a return to normal criteria according to the rules specified. The inspector shall record and maintain a record of laboratory results.

(1) Normal Acceptance Criteria. When on normal criteria and the last laboratory sample result is:

a. Zone A, B, or nonconsecutive C; do not take action against product and continue on normal criteria.

b. Zone D, or the second consecutive Zone C, or the seventh consecutive result above Zone A; do not take action against the product produced on the shift represented by the sample but go to tightened criteria for the next sampling. Retain all product produced after the shift from which the sample was taken subject to sampling and acceptance rules under tightened acceptance criteria (Sec. 18.24(g)(2)).

c. Zone E; retain all product produced on the shift represented by the sample and go to tightened criteria. Retain all product produced after the shift sampled and proceed the same as for Zone D above.

(2) Tightened Acceptance Criteria. The sampling rate will continue at the same rate as for normal criteria subject to the limitations in Table 18.3. When on tightened criteria and the last laboratory result is:

a. Zone A (except for the fourth consecutive) or Zone B, release the shifts production and continue on tightened criteria and continue retention of subsequent production.

* b. The fourth consecutive Zone A from four consecutive production periods regularly sampled; allow product to move freely and go to normal acceptance criteria.
* c. Zone C, D, or E; retain all product from the sampled lot for rework or other MPI approved disposal, or for resampling only according to Sec. 18.24(g)(3). Continue on tightened criteria and continue holding production pending sample results. The lots produced on the shift other than than the sampled lot may be sampled individually (three 1-pound units) at plant request and released lot by lot if results are in Zone A. Lots not released at this point may be resampled only according to Section 18.24(g)(3). All samples drawn from these lots mu analyzed by an MPI certified laboratory at plant expense.

* (3) Resample Procedure. Retained lots that fail to qualify for release under the previously described procedures may be resampled at the plant request as follows:
* a. The MPI will randomly select 30 individual 1-pound units from each lot. Each sample unit must be individually analyzed. For the release of the lot, all 30 individual results must average Zone A and no individual result may be in Zone E.
* b. All samples drawn from MPI retained lots must be analyzed by an MPI certified laboratory at plant expense.

* (h) Approved Quality Control Procedure
* (1) Plant. Plants shall submit their control procedure through the inspector in charge to STS-SDS for approval. Such procedure must control the product during preparation, must be current, include laboratory analyses of samples, and include proper action when product fails to comply with regulations. Records of analyses and formulations must be readily available to the inspector.

(2) Inspector. (See Subpart 18-A, section 18.6, and Definitions herein) Submit an average of one verification sample (consisting of three units, approximately 1 pound each from three different batches from one lot) a week to the Government laboratory without giving a portion to the plant. The average of one sample per week is submitted regardless of the types or volumes of different products produced. The laboratory used by the plant in conjunction with the quality control program may or may not be by a certified laboratory. If analysis is by a certified laboratory the testing is part of the approved quality control system. Companion samples should not be sent routinely to the Government laboratory. When used with an approved quality control program, the laboratory does not function as a certified laboratory, but only as part of the total quality control system. This sampling is to evaluate the total system, not the laboratory, and to verify that the process is in control. If a verification sample result is in Zone E, proceed as follows:

Check whether or not plant has found a Zone E in product on same shift, and whether proper action was taken. If plant shows a Zone E and retained product, take no action. If the plant did not retain product, do not take action against product but recheck plant records and procedures. Warn the plant of the Zone E result.

If a second Zone E is found by regular verification sampling within a 6-month period and no product has been retained by the plant, the inspector may rescind procedure approval and revert to "Lot Inspection" beginning with normal criteria.

(i) Sampling Procedure Options for Approved Quality Control

Option 1. Selection of verification samples. The inspector shall draw samples at least daily and keep samples under security until a week of

* production has been sampled. From
* these samples randomly select one
* verification sample (three 1-pound
* units) for submission to MPI labora-
* tory. The inspector may bias the
* sample selection by selecting the
* sample from a suspect lot of produc-
* tion. The remaining samples are to
* be returned to the plant unmarked so
* that lot is not identified.
* Option 2. When requested by the
* establishment, sampling may be con-
* ducted to provide both MPI verifica-
* tion samples to MPI laboratories and
* companion samples to the plant certi-
* fied laboratory. The inspector shall
* sample as in (1) above except collect
* duplicate samples daily (two 1-pound
* samples each time for a total of six).
* Both sets of three 1-pound samples are
* to be numbered with a three digit sam-
* ple number starting with 101. When
* 999 is reached start again at 101.
* One of the dual samples (three 1-
* pound) is given to the plant certified
* laboratory daily. For the selection
* of verification sample(s) to submit to
* MPI laboratories, follow instruction
* in Option 1 above. Complete Block 13
* of the MP Form 22 by stating "Verifi-
* cation and companion sample to certi-
* fied laboratory, sample number _____."
* MPI laboratory verification results
* will be returned to the inspector on
* MP Form 22. The results will be used
* only as a verification check upon the
* process control of an approved quality
* control procedure. The inspector
* should not conduct a comparison check
* of certified laboratory's analytical
* capability.

18.25 DRY, SEMIDRY SAUSAGE

(a) Mineral oil

To prevent mold growth, mineral oil may be used on casing exterior after curing and drying as prescribed by regulations (Part 318).

(b) Water, wine

When water is used as a solvent for curing ingredients and so added to gain a more even distribution, or when wine is added as a flavoring to certain kinds of sausage processed under limitations prescribed in the regulations (MR-318), it is permissible to add not more than approximately 1/4 of 1 percent of water or 1 percent of wine to sausage of the type that is treated for destruction of possible live trichinae by any one of the methods prescribed in regulations (MR-318). When used, such ingredients should be shown in the ingredients statement in order of their percentage content.

CURING AND SMOKING

Subpart 18-F

(Regs: M-318; P-Subpart O)

18.28 CURING

Curing may be done by injecting and/or holding product in cure solutions containing water, salt, and other approved ingredients.

18.29 TRICHINAE CONTROL; EXEMPTION

For trichinae control, pork muscle tissue must be treated as required by regulations (M-318).

(a) Cured, Unsmoked, Product

Cured, unsmoked, and uncooked boneless pork cuts, packaged in consumer-size packages, need not be treated for trichinae. They shall be limited to 10 percent added substance.

(b) Scotch Style Ham

Cured, boned, unsmoked, rolled ham

is sometimes known as "scotch style." Home cooking is customary. Therefore, trichinae treatment is not required.

(c) Hams for Armed Forces

Smoked hams purchased by the Armed Forces need not be treated for trichinae when so requested. However, they must not be diverted into trade channels unless treated by a method prescribed in the regulations.

(d) Tropic Cure Ham

Tropic cure hams for export commercially when labeled "tropic cure smoked ham" must have a water-protein ratio not in excess of 3.25 to 1 and a salt content of 6 percent. These hams need not be treated for trichinae.

Chart 20.1 - Forms, cont.

Form	Use	Copies	Submittal	Distribution	Other Information
++MP 70, Animal Health Certificate for Importation of Slaughtered Domesticated Poultry	Export to the Federal Republic of Germany	4	Completed by plant and MPI veterinarian. Upon completion	Same as MP 506	See form
++MP 81, Certificate Which Must Accompany Imported Frozen Meats, Offals, Poultry, Animal Products and Products of Animal Origin	Export to France	4	Completed by plant and MPI veterinarian. Upon completion	Same as MP 412-3	See form
++MP 82, Sanitary Certificate (Poultry)	Export to France	4	Completed by plant and MPI veterinarian. Upon completion	With shipment	See form
++MP 112, Laboratory Specimen Receipt	When specimen released to private or commercial laboratory	3	For each sample or composite	See form	
MP 132, Application for Label Approval	As required	3	By plant for each label	STS-LP Gov. office	See form
++MP 215, Condition of Reinspected Poultry	At slaughter plants	1	Daily. At least weekly, if no floorman or grader present	Gov. office	Proc. plants: use for inspection of product for condition
MP 401, Application for Federal Meat and Poultry Inspection	To obtain Federal inspection	4	Upon request for inspection. Completed by applicant	See form	Complete all sections. If not applicable, enter "N/A"; if negative, "No" or "None".
+MP 402-1, Summary of Ante-Mortem Examination	Ante-mortem inspection	1	Upon completion	Gov. office	Optional
+MP 402-2, Identification Card--Ante-Mortem	U.S. suspects	1	Upon completion	Gov. office	Reverse side use - optional
+MP 403, Ante-Mortem and Post-Mortem Inspection Summary	Ante-and post-mortem inspection	2	Weekly	DPC, Chicago-orig. Gov. office duplicate	See sec. 20.11
+MP 403-4, Method of Slaughter Report	Slaughter plant; each species slaughtered	1	Annually. July 1-5 by VMO	STS-TS	Submit immediately when slaughter method changes
+MP 403-6, Final Post-Mortem Disposition of Retained Carcasses and Parts	For suspects and retained carcasses	1	Prepared by VMO	Gov. office	Separate form for tuberculosis reactor; see sec. 20.12

212 Chart 20.1 - Forms, con't.

Form	Use	Copies	Submittal	Distribution	Other Information
+MP 403-7, Certificate of Ante-Mortem or Post-Mortem Disposition of Tagged Animals	Slaughter plant	2	Upon plant request; by VMO	Plant-orig. Gov. office-copy	Accountable, keep under security. Record only official (USDA) tags--U.S. Suspect, U.S. Retained, reactor, backtags, etc.
MP 403-10, Application and Permit to Obtain Specimens from Official Meat Establishments	Release of specimen(s)	3	Completed by applicant. Submitted to inspector in charge	See form	Only items specified on form may be removed
+MP 404, Processing Operations at Official Establishments	Completed by management of proc. operations	3	Weekly; to inspector in charge	Chicago - orig. Gov. office-copy plant - copy	See sec. 20.13
+MP 406-2, Daily Report of Denaturing and Tanking	For cond. carcasses and/or parts	1	Optional Completed as required by area supervisor	Gov. office	Record tag and/or seal numbers, sealing and seal breaking time, inspector's name
+MP 406-3, Daily Report of Handling Meats Passed for Cooking	For carcasses and/or parts passed for cooking	1	Daily	Gov. office	
+MP 407, Meat and Meat Food Products Condemned on Reinspection and Destroyed	For product cond. on reinspection by the inspector	2	Weekly	DPC, Chicago-orig. Gov. office-copy, Plant - A copy may be obtained upon request	Not used for repayment or claim adjustment between plants. Negative report not required See sec. 20.14
+MP 407-4, Materials Rejected for Use	For each material rejected	2	Upon completion	DPC, Chicago-orig. Gov. office-copy	Circle one code no. for each group. Describe material, cause of rejection, disposition and agency notified; See sec. 20.15
+MP 408, Request and Notice of Shipment of Sealed Meats	Product shipped under seal	4	Upon completion	Destination inspector-orig. Inside sealed car-copy. Gov. office-copy	May be modified to cover shipment of product for further processing
+MP 409-1, Permit to Return Alleged Unsound Product	Alleged unsound product	3	Upon completion	See MR-325.10	Identifies and permits return of alleged unsound product to official plant
+MP 410, Imported Meat and Meat Food Products. Application and Report	Inspection of imported product	8	Upon completion	See form	See sec. 27.19
+MP 410-10, Official Veterinary Certificate of Wholesomeness	Export of fresh meats to Germany	1	Upon completion	With shipment	Fresh meat and edible organs

Chart 20.1 - Forms, con't. 213

Form	Use	Copies	Submittal	Distribution	Other Information
+MP 410-11, Official Veterinary Certificate of Wholesomeness	Export of prepared meats to Germany	1	Upon completion	With shipment	Processed meat products
+MP 410-12, Animal Health Certificate for Importation of Meat from Domestic Swine	Export of swine meat to Germany	1	Upon completion	With shipment	See form
+MP 410-13, Health Certificate for the Import of Meat from Domestic ruminants	Export of ruminant meat to Germany	1	Upon completion	With shipment	See form
+MP 412, Application for Export Certificate and/or Stamps	Export. Completed by plant	2	Upon completion	See form	List all product. Request on one form only one type of certificate and/or stamps.
+MP 412-3, Regular Export Certificate	Export	4	Completed by plant and inspector. Upon completion	Shipper- orig., duplicate and quadruplicate. Gov. office-triplicate	Show establishment no. (s) and address of consignor
+MP 412-5, Certificate for Export of Meat or Meat Products to Switzerland	Export to Switzerland	1	Upon completion	With shipment	Do not attach certificate to carton
+MP 412-7, USDA Meat Inspection Service, Certificate of Pork Product	Export of lard to Colombia	5	Upon completion	With shipment orig. & 3 copies. Gov. office-4th copy	See form
+MP 412-8, Sanitary Certificate (Certificat Sanitaire)	Export to Algeria, Belgium, France, Poland	1	Upon completion	With shipment	Use USDA-MPI seal
+MP 412-9, Sanitary Certificate for Netherlands	Export to Netherlands	1	Upon completion	With shipment	Meat food products. Put USDA-MPI seal on form
+MP 412-9-1, Meat Certificate for Importation into the Netherlands	Export to Netherlands	1	Upon completion	With shipment	Animal casings, fresh meat and meat byproducts
+MP 412-11, Sanitary Certificate	Export to France	1	Upon completion	With shipment	Fresh meat and/or offal
+MP 412-12, Sanitary Certificate "D"	Export to France	1	Upon completion	With shipment	Processed meat and/or edible fat
MP 412-13, Certificate for Export to Japan	Export to Japan	4	Completed by plant and inspector in charge. Upon completion	With Shipment	See form

214 Chart 20.1 - Forms, con't.

Form	Use	Copies	Submittal	Distribution	Other Information
++MP 412-14, Veterinary Certificate for Export of Poultry to the United Kingdom	Export to United Kingdom	4	Completed by plant and MPI veterinarian. Upon completion	With Shipment	See form
+MP 413, Certificate for Importation of Casings into the Netherlands	Export to Netherlands	4	Completed by plant and MPI veterinarian. Upon completion	Same as MP 415-4	See form
+MP 414-3, Regular Horsemeat Export Certificate	Export	3	Completed by plant and inspector. Upon completion	Shipper - orig. & duplicate, Gov't office triplicate	Show establishment number(s) and address of consignor
+MP 415-3, Inedible Product Export Certificate	Export	4	Upon completion	With shipment Gov. office-copy	See form
+MP 415-4, Animal Casings Export Certificate	Export	4	Upon request	With shipment Gov. office-copy	See form
+MP 415-5, Special Export Certificate for Animal Casings	Export	2	Upon completion	With shipment	See form
MP 420-3, Receipt of Accountable Property	Accountable property	3	Upon completion	See form	
MP 423, Submission and Approval of Plans and Specifications	Applying for Federal inspection by applicant	4	See form	See form	
+MP 437, Notice of Receipt of Unclean or Unsound Product	For unclean or unsound product	4	See form	See form	Not issued to plant

DEPARTMENT OF AGRICULTURE

Food Safety and Quality Service

METRIC MEASUREMENTS

Solicitation of Information

This notice is to solicit information and opinions on the voluntary use of metric units of measurement for all purposes under the jurisdiction of the Federal Meat and Poultry Inspection Program.

In 1975 Congress enacted the Metric Conversion Act of 1975 (15 U.S.C. 205(a) et seq.) to coordinate the increasing use of the metric system and to establish a board to coordinate the voluntary conversion by U.S. industries to the metric system. Since use of the metric system is voluntary under the terms of this Act, no regulatory action can be taken to require use of the metric system; however, neither should action be taken which inhibits the voluntary conversion by an industry to the metric system. This would seem to be contrary to the intent of the Metric Conversion Act.

The Federal Meat Inspection Act (21 U.S.C. 601 et seq.) requires that any word, statement or other information required by or under authority of the Act to appear on the labeling be conspicuous and in terms that are likely to be read and understood by the ordinary individual under customary conditions of purchase and use. The Poultry Products Inspection Act (21 U.S.C. 451 et seq.) has the same requirements for labeling poultry products.

Although the metric system is widely used in other countries, it is in common usage in the United States only in the scientific fields. Because of this limited usage, a long period of limited or dual use may be necessary to fully acquaint the general public with the metric system.

The Meat and Poultry Inspection Program (MPI), Food Safety and Quality Service, is requesting information on ways to implement the changes with the meat and poultry industries without disrupting normal marketing procedures and confusing consumers.

There are several actions which MPI can take in reference to the Metric Conversion Act:

(1) Require English weights and measures until a definite conversion date is established and permit voluntary use of metric weights and measures as well (This is current practice; however, manufacturers could be further encouraged to apply dual labels.);

(2) Require use of dual weights and measures; or

(3) Allow individual companies to decide whether to use either English, or metric, or duel declaration whenever they wish to convert.

Labels for many food items, including some meat and poultry products, already have dual weight declarations in which the English weight is followed by the metric equivalent in parenthesis. This method gives consumers the familiar weight as well as its metric equivalent, allowing them to become accustomed to the metric system before complete conversion to it.

In considering this matter, the Department is soliciting public comments on how it should carry out the intent of the Metric Conversion Act, as well as its responsibilities to the consumer for truthful, informative labeling of meat and poultry products.

Any person wishing to submit written data, views, or arguments concerning this matter may do so by filing them, in duplicate, with the Hearing Clerk, U.S. Department of Agriculture, Washington, D.C. 20250, or if the material is deemed to be confidential, with the Inspection Standards and Regulations Staff, Technical Services, Meat and Poultry Inspection Program, Food Safety and Quality Service, U.S. Department of Agriculture, Washington, D.C. 20250, by September 5, 1977.

Any person desiring opportunity for oral presentation of views should address such request to the Staff identified in the preceding paragraph, so that arrangements may be made for such views to be presented prior to the date specified in the preceding paragraph. A record will be made of all views orally presented.

All written submissions and records of oral views made pursuant to this notice will be made available for public inspection in the Office of the Hearing Clerk during regular hours of business, unless the person makes the submission to the Staff identified in the preceding paragraph and requests that it be held confidential. A determination will be made whether a proper showing in support of the request has been made on grounds that its disclosure would adversely affect any person by disclosing information in the nature of trade secrets or commercial or financial information obtained from any person and privileged or confidential. If it is determined that a proper showing has been made in support of the request, the material will be held confidential; otherwise, notice will be given of denial of such request and an opportunity afforded for withdrawal of the submission. Requests for confidential treatment will be held confidential (7 CFR 1.27(c)).

Comments on this notice should bear a reference to the date and page number of this issue of the FEDERAL REGISTER.

Done at Washington, D.C. on May 2, 1977.

F. J. MULHERN,
Acting Administrator,
Food Safety and Quality Service.

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